CITY OF DULUTH

DEPARTMENT OF PARKS AND RECREATION

PLAN SYMBOLS

PROPERTY LINES

EXISTING CONTOUR LINES

CONSTRUCTION PLANS FOR: HARTLEY ROAD TRAIL IMPROVEMENTS

EXISTING TRAIL EDGE

NEW TRAIL CENTER LINE

NEW TRAIL SURFACE

BOARDWALK

CITY PROJECT NO.

SITE LOCATION DULUTH HERMANTOWN Hermantown

PROJECT LOCATION MAP

NOT TO SCALE

WARNING:

LOCATION OF UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR. CALL BEFORE DIGGING. GOPHER STATE ONE CALL 1-800-252-1166 REQUIRED BY LAW

KEY PLAN NOT TO SCALE

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. AVAILABLE AT: http://www.dot.state.mn.us/pre-letting/spec/index.html

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MN MUTCD. INCLUDING THE FIELD MANUAL DATED JANUARY 2014. AVAILABLE AT: http://www.dot.state.mn.us/trafficeng/publ/fieldmanual2011/index.html

THE 2015 EDITION OF THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT STANDARD CONSTRUCTION SPECIFICATIONS AND SUPPLEMENTS OR ADDENDUMS SHALL SPECIFICATION SHALL BE THE GOVERNING SPECIFICATIONS.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX MAP
2	OVERALLPLAN AND WORK DESCRIPTION
3	TRAIL SECTION "A1"
4	TRAIL SECTION "B"
5	TRAIL SECTION "C"
6	TRAIL SECTION "D"
7	TRAIL SECTION "E"
8	TRAIL SECTION "A2"
9	TRAIL SECTIONS "F" & "G"
10	BOARDWALKS. BASE BID TYPICAL CONSTRUCTION
11	WETLAND BOARDWALK. SECTION "H" ALTERNATE #3
	CONSTRUCTION
12	BOARDWALK OVERLOOK. SECTION "H"
13-16	EXISTING TRAIL CONDITION PHOTOS

THIS PLAN SET CONTAINS 16 SHEETS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Luke W. Sydow

LANDSCAPE ARCH	HITECT (TYPED OR PRINTE	D NAME)
SH	April 7, 2016	#25866
LANDSCAPE ARCHITECT	DATE	REG. NO.
	CITY APPROVAL	
APPROVED	PARKS MANAGER	DATE

ASSOCIATES

219 WEST FIRST STREET, SUITE 350 DULUTH, MN 55802 (P) 218.391.1335 (F) 218.722.6697

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TRAIL ROAD

HARTLEY

OF DULUTH, MINNESOTA

TITLE SHEET AND

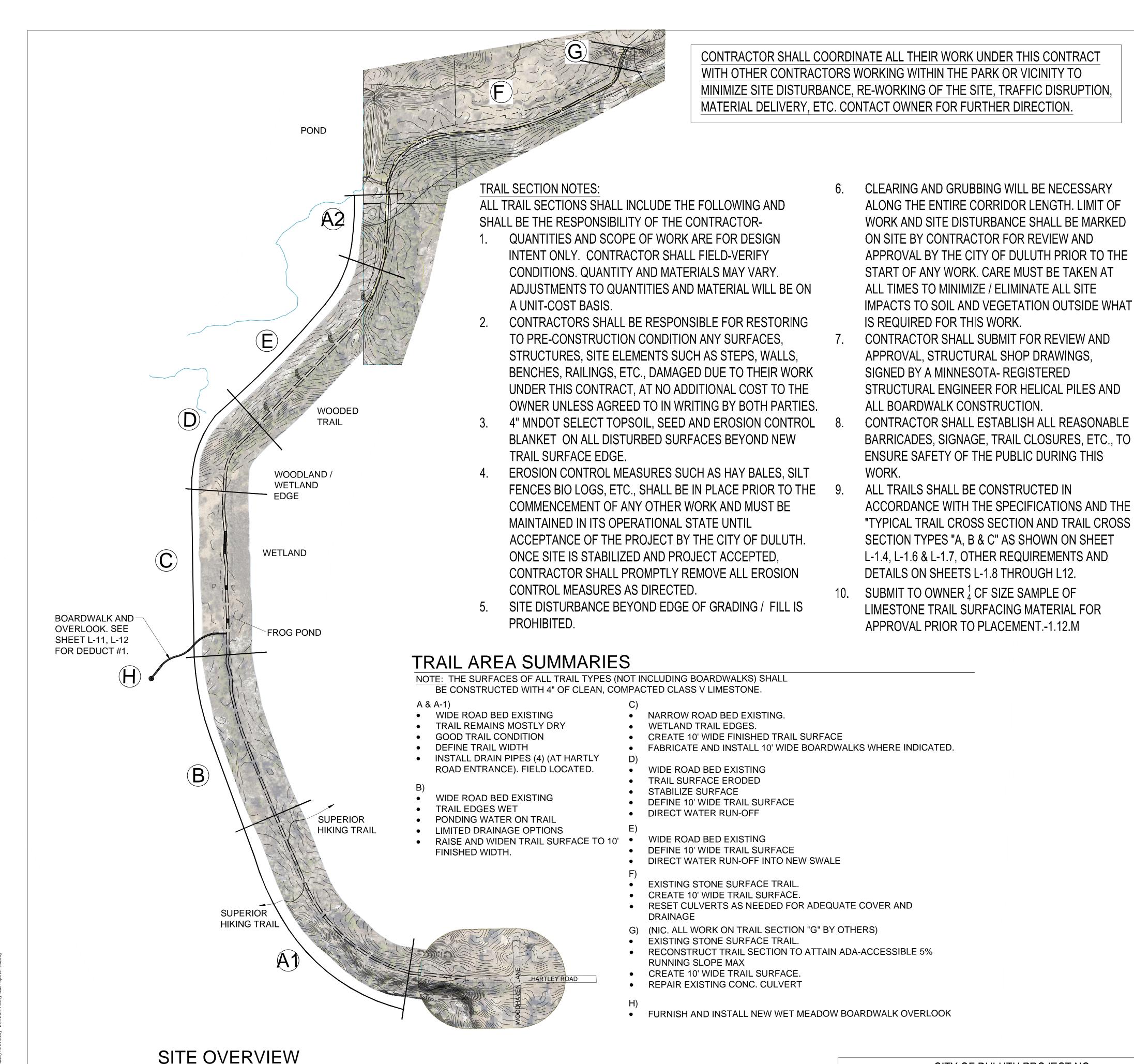
LWS

15205

CITY OF DULUTH PROJECT NO.

DRAWN BY: LWS

SHEET NO. 1 OF 16



SITE NOTES: QUANTITIES AND SCOPE OF WORK ARE FOR DESIGN INTENT ONLY. FIELD VERIFY. QUANTITIES AND MATERIALS MAY VARY. ADJUSTMENTS TO QUANTITIES AND MATERIALS WILL BE ON A UNIT-COST BASIS.	DESCRIPTION OF WORK
TRAIL SECTION "A1" & "A2"	 +/- 1,400 L.F. of trail (A1 & A2). Provide finished trail width of 10'. Till and level existing edges. Remove vegetation. Install five (6) 12" HDPE pipe beneath trail. Place structural fill as needed for 10' finished trail width. Place 4" compacted limestone trail surfacing. +/- 105 C. Y.
RAIL SECTION "B"	 +/- 675 L.F. of trail. Provide finished trail width of 10'. Till and level existing edges. Remove vegetation. Install four (4) 12" HDPE pipe beneath trail. Place compacted class V fill as needed for 10' finished trail width an average of 12" above current trail surface. +/- 246 C. Y. Place 4" compacted limestone trail surfacing. +/- 82 C. Y.
TRAIL SECTION "C"	 +/- 5400 L.F. of limestone surface trail. +/- 120 L.F. new wooded boardwalk Remove for salvage by others 165 L.F. of 6' wide wooden boardwalk. Helical piers for boardwalk footings. (+/- 33 piers) Provide finished trail width of 10'. Clear and grub as needed for trail corridor. Place compacted class V fill as needed for 10' finished trail width. Place 4" compacted limestone trail surfacing. +/- 66 C. Y.
TRAIL SECTION "D"	 +/- 320 L.F. of trail. Provide finished trail width of 10'. Add compacted class V to repair trail washout. Remove rocks larger than 6" in diameter Till and level existing edges. Remove vegetation. Ditch up-hill side of trail and install three (3) 12" HDPE pipe beneath trail to daylight. Place structural fill as needed for 10' finished trail width. Raise trail to obtain drainage to beyond sides of trail. Water is not to flow along trail surface. Place 4" compacted limestone trail surfacing. +/- 39 C. Y.
TRAIL SECTION "E"	 +/- 800 L.F. of trail. Provide finished trail width of 10'. Till and level existing edges. Remove vegetation. Ditch on uphill side. Install four (4) 12" HDPE pipe beneath trail to daylight. Place compacted class V as needed for 10' finished trail width. Place 4" compacted limestone trail surfacing. +/- 98 C. Y.
TRAIL SECTION "F"	 +/- 1,160 L.F. of trail. Provide finished trail width of 10'. Remove and reinstall any existing culvert which does not have 12" fill min above top of culvert. Replace existing culverts if smaller than 12" or if not a smoothwalled pipe on interior. Extend existing culverts as needed to accommodate new 10' trail width. Place compacted class V as needed for 10' finished trail width. Maintain/regrade existing drainage swales as necessary to maintain water flow Place 4" compacted limestone trail surfacing. +/- 141 C. Y.
TRAIL SECTION "G" (BY OTHERS. NIC)	 +/- 90 L.F. of trail. Provide finished trail width of 10'. Add class V fill to lessen slope of trail to meet accessibility standards. +/- 100 CY Place 4" compacted limestone trail surfacing. +/- 11 C. Y.
TRAIL SECTION "H"	 Furnish and install new wooden wetland overlook boardwalk on helical piers. +/- 360 LF with hexagon space at area of boardwalk. Bid alternate to install Wickcraft Inc modular boardwalk in lieu of helical pier-supported wooden boardwalk.



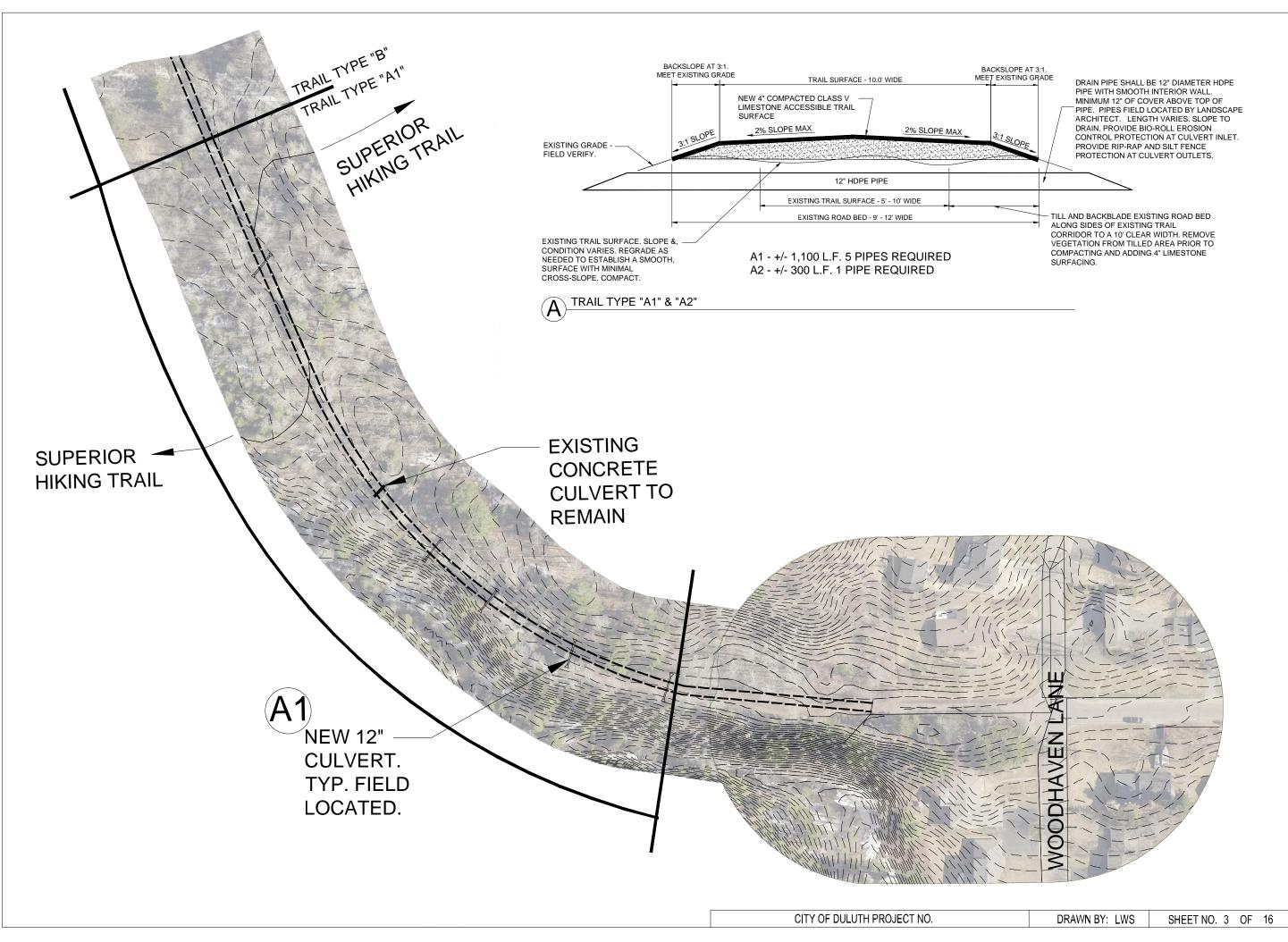
CITY OF DULUTH PROJECT NO

DRAWN BY: LWS

SHEET NO. 2 OF 16

SHEET NUMBER

L-2



SAS LANDSCAPE ARCHITECTURE

+ ASSOCIATES

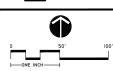
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ISSUE RECORD/REVISION

HARTLEY ROAD TRAIL

DULUTH, MINNESOTA



SHEET KEY

TRAIL SECTION "AI"

TE: 4/7/16

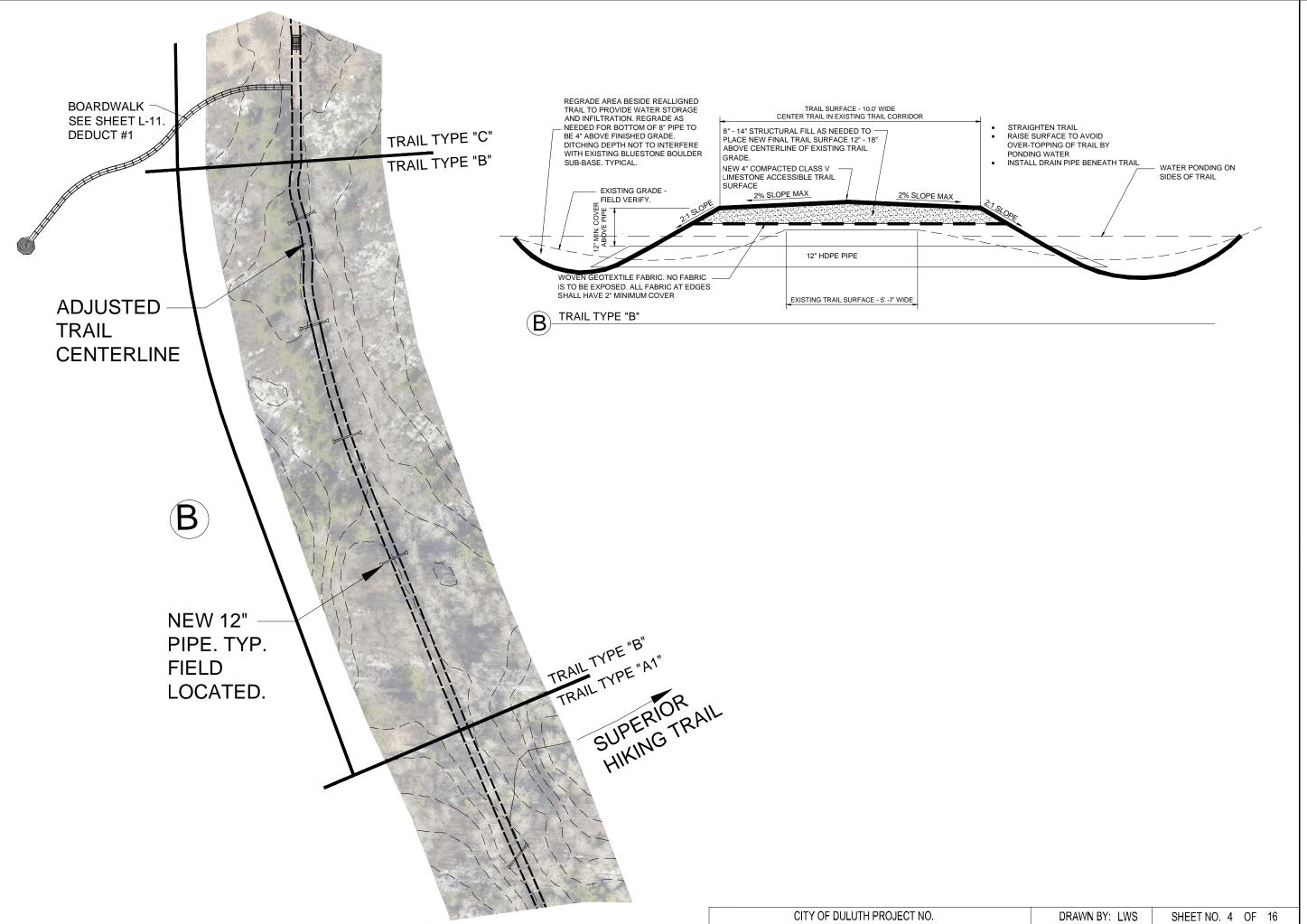
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L-3

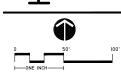


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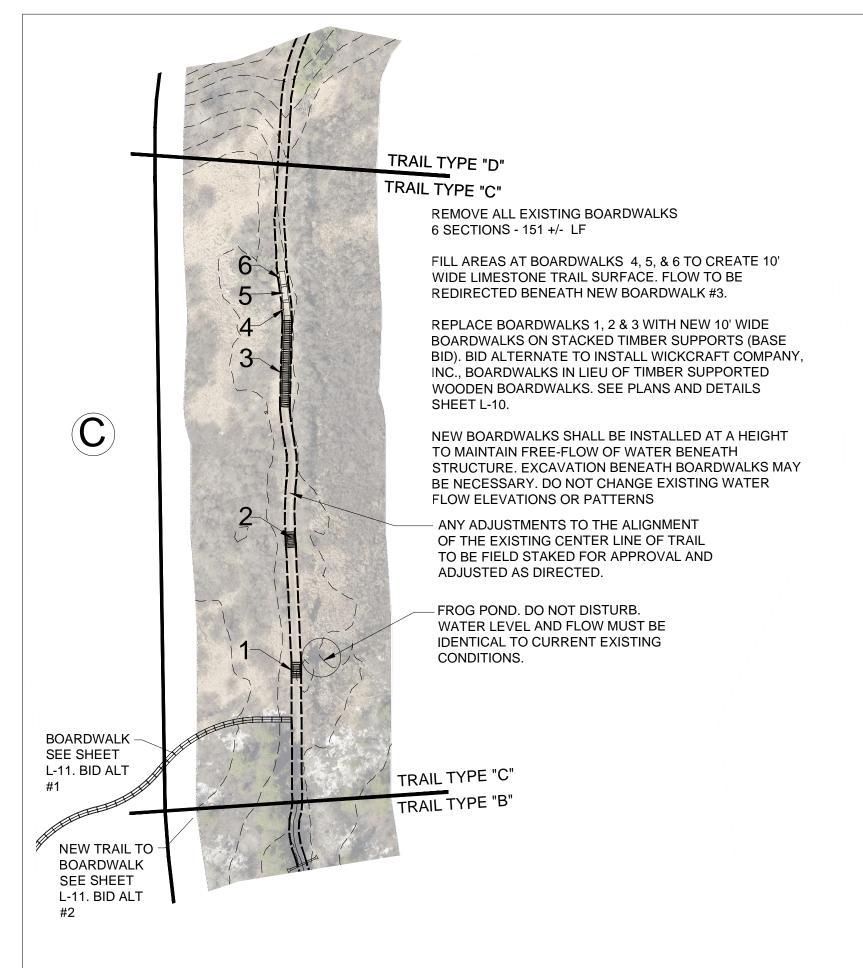
TRAIL DULUTH, MINNESOTA ROAD HARTLEY

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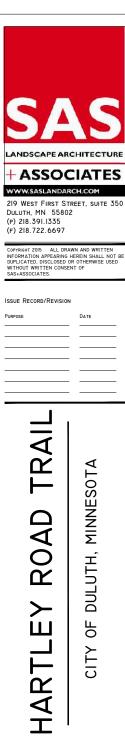


SHEET TITLE
TRAIL SECTION "B"

15205



NOTE: SEE SHEET L-10 FOR TRAIL TYPE "C" AND **BOARDWALK DETAILS**



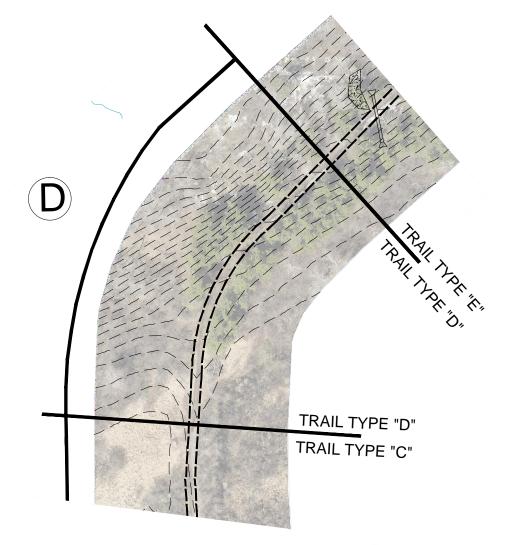
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TRAIL SECTION "C"

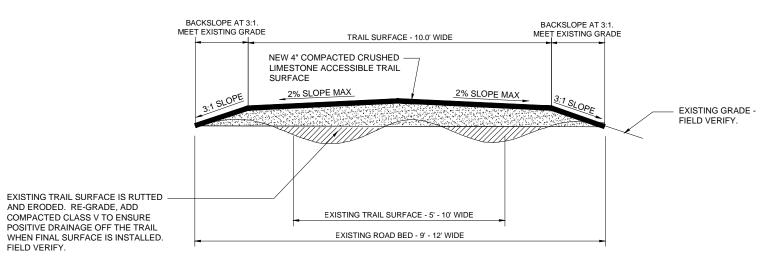
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SHEET NO. 5 OF 16





ERODED TRAIL SECTION

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TRAIL DULUTH, MINNESOTA ROAD HARTLEY OF.

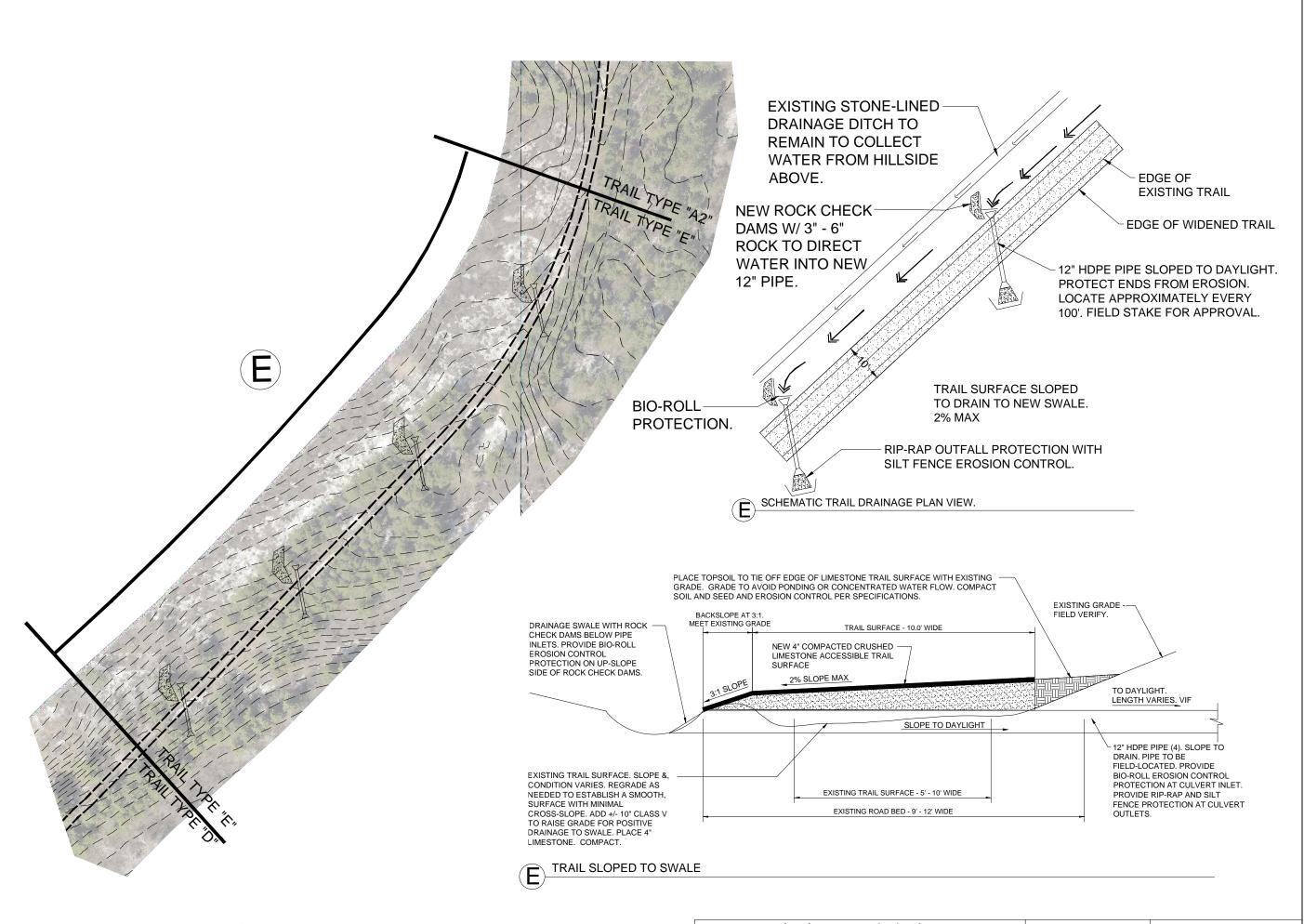
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TRAIL SECTION "D"

LWS 15205

L-6

CITY OF DULUTH PROJECT NO. DRAWN BY: LWS

SHEET NO. 6 OF 16

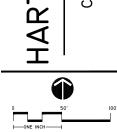


+ ASSOCIATES 219 WEST FIRST STREET, SUITE 350 DULUTH, MN 55802 (P) 218.391.1335 (F) 218.722.6697

TRAIL ROAD Ш

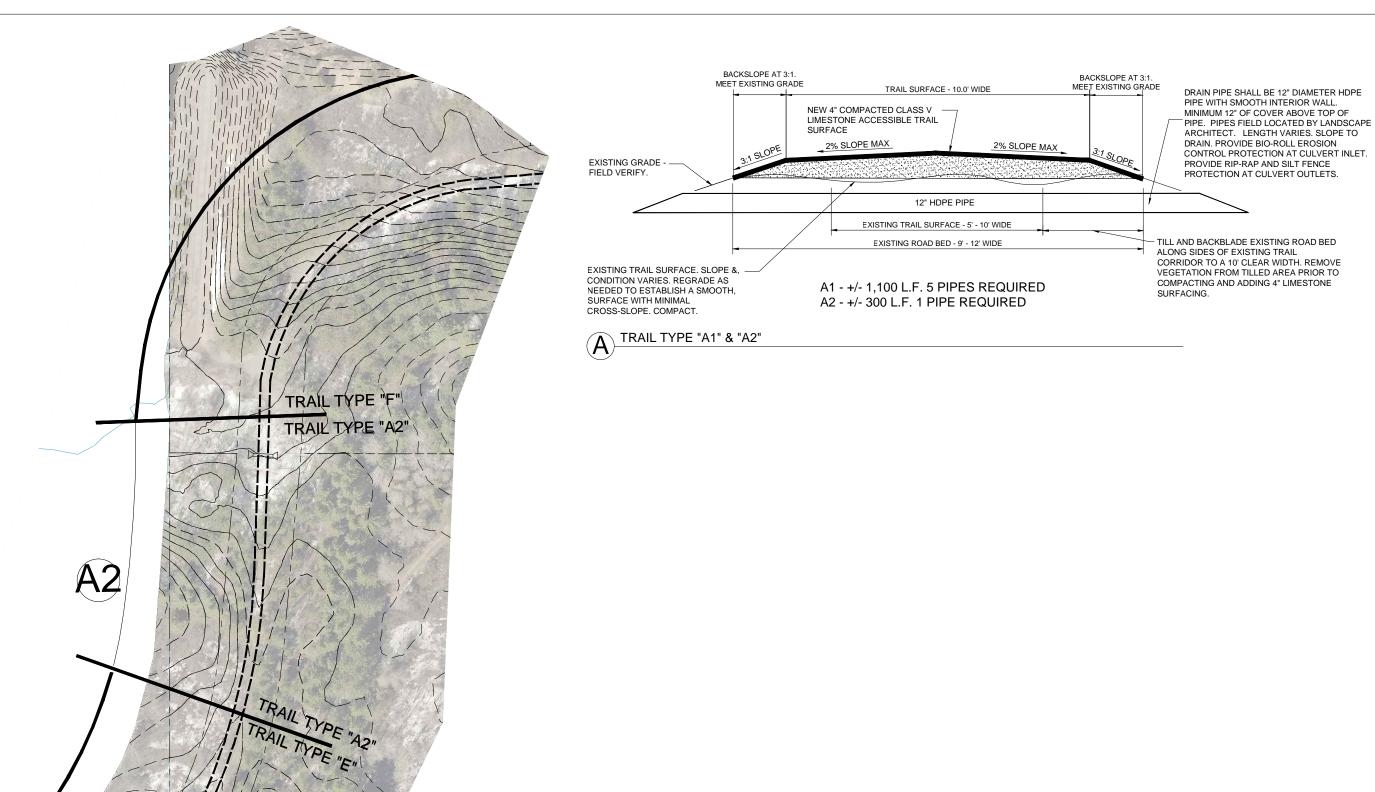
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TRAIL SECTION "E"

15205



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PURPOSE DATE

LANDSCAPE ARCHITECTURE

+ ASSOCIATES

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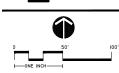
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HARTLEY ROAD TRAIL

DULUTH, MINNESOTA

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SHEET KEY

SHEET TITLE
TRAIL SECTION "A2"

TE: 4/7/16

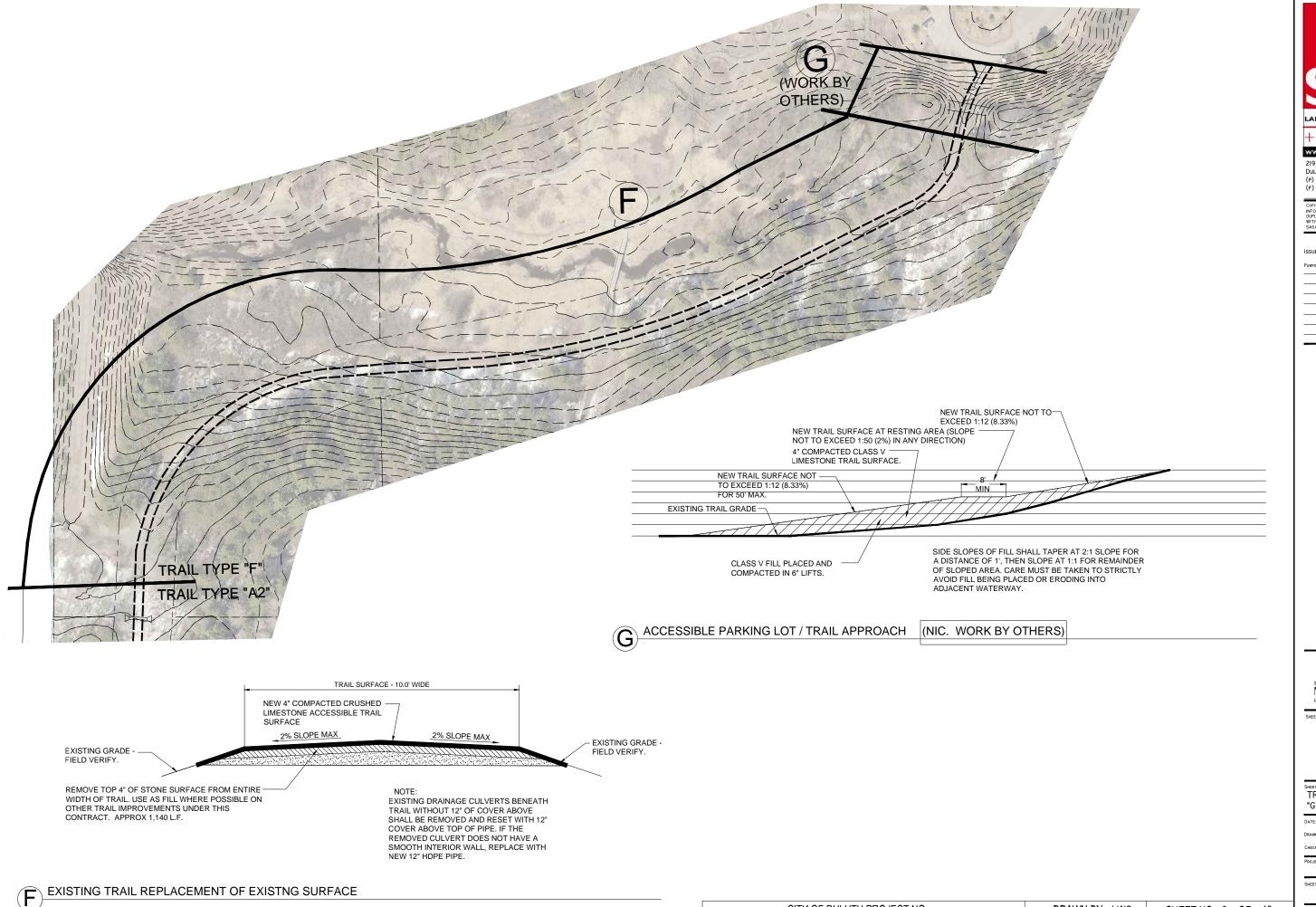
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PROJECT NUMBER

SHEET NUMBER

L-8



LANDSCAPE ARCHITECTURE + ASSOCIATES

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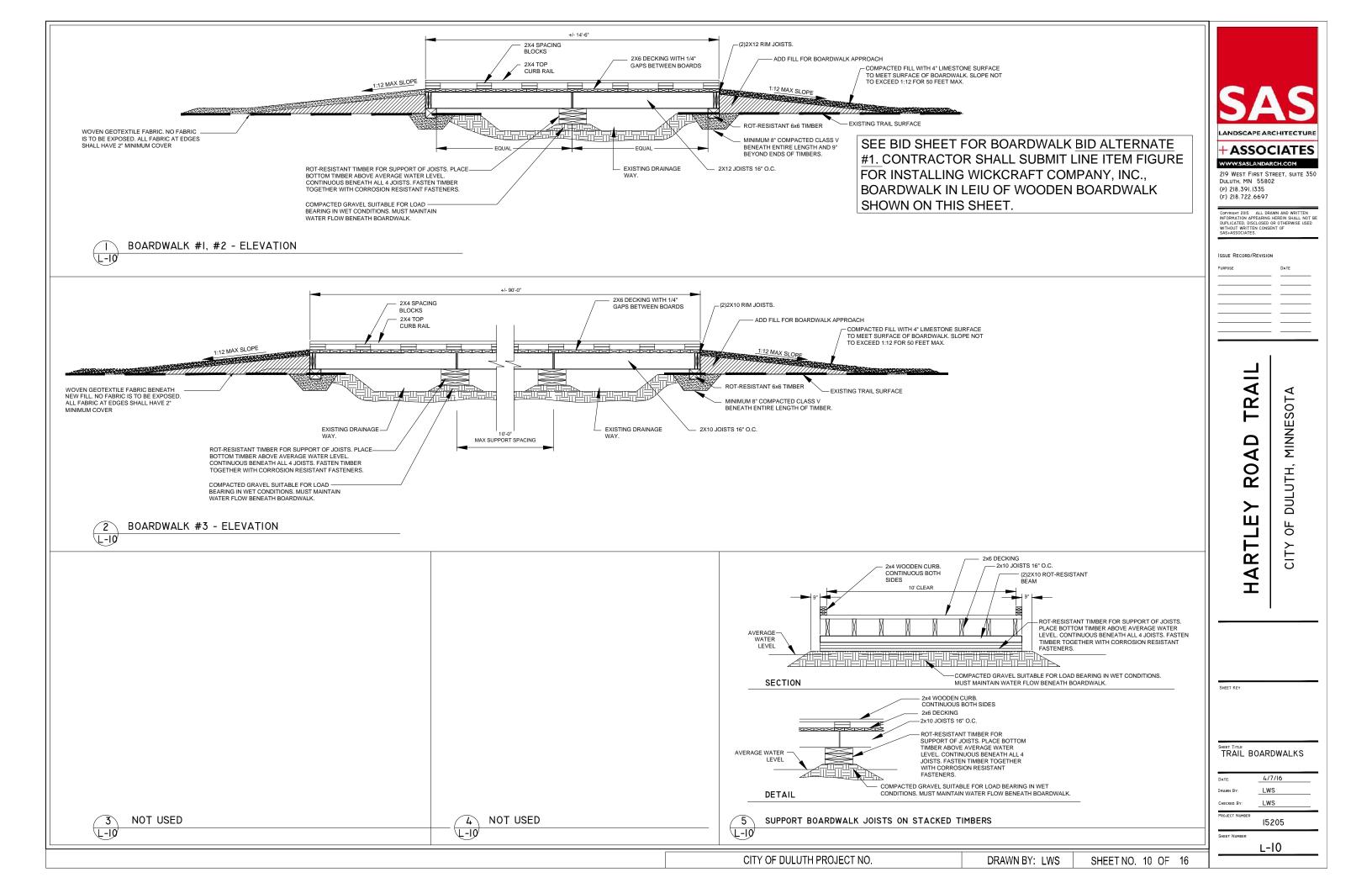
DULUTH, MINNESOTA

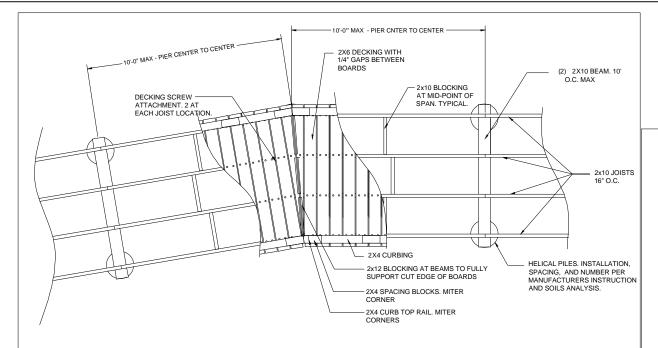
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TRAIL SECTIONS "F" &

LWS

15205





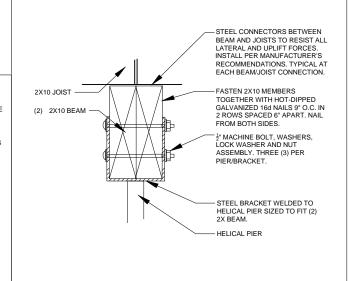
CONTRACTOR TO INSTALL SIMPSON STRONG-TIE HARDWARE COMPATIBLE WITH TREATED LUMBER. ALL HARDWARE SHALL BE RATED FOR MEDIUM OR HEAVY DUTY USE. CONTRACTOR SHALL MAKE ALL CONNECTIONS USING CONSTRUCTION HARDWARE. NO STRUCTURAL ELEMENT MAY BE FASTENED TOGETHER WITH ONLY BOLTS, NAILS OR SCREWS.

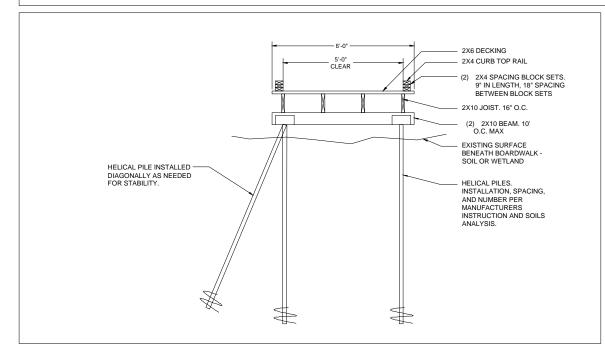
CONTRACTOR TO INSTALL ALL BRACKETS AND OTHER HARDWARE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION. ALL NAILS, SCREWS OR OTHER FASTENERS MUST BE INSTALLED AS SPECIFIED BY MANUFACTURER AND CURRENT CONSTRUCTION METHODS AND RECOMMENDATIONS

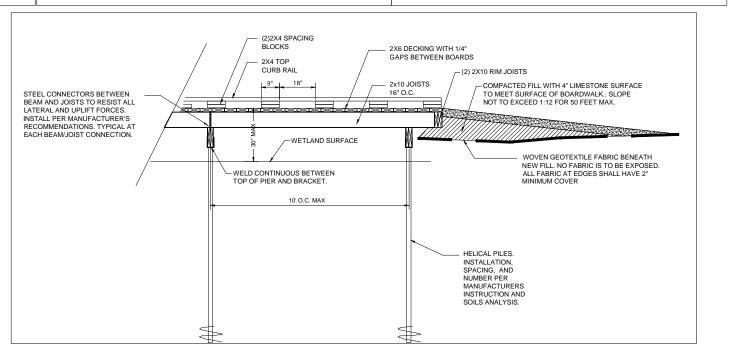
ALL HARDWARE INCLUDING SCREWS AND THROUGH-BOLT ASSEMBLIES SHALL BE STAINLESS STEEL, GALVANIZED, OR COATED EXTERIOR-GRADE HARDWARE.

- ALL DECKING BOARDS SHALL BE INSTALLED WITH GRAIN PATTERN AS SHOWN GAP BETWEEN BOARDS SHALL BE UNIFORM ALONG ENTIRE BOARDWALK. GAP SHALL BE A MAXIMUM OF $\frac{1}{4}$ ". ANY CHANGE IN DIMENSION OF DECKING BOARDS DUE TO DRYING OR SEASONAL CHANGES SHALL NOT RESULT IN A GAP BETWEEN BOARDS OF GREATER THAN 3" 3" STAINLESS STEEL OR EXTERIOR-GRADE DECKING SCREWS. COUNTER SINK HEADS 18 2x10 JOIST

CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL, STRUCTURAL SHOP DRAWINGS, SIGNED BY A MINNESOTA- REGISTERED STRUCTURAL ENGINEER FOR HELICAL PILES AND ALL BOARDWALK CONSTRUCTION.







+ ASSOCIATES WWW.SASLANDARCH.COM 219 WEST FIRST STREET, SUITE 350 DULUTH, MN 55802

(P) 218.391.1335 (F) 218.722.6697

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WETLAND BOARDWALK. SECTION "H" - BID

ALTERNATE #3 LWS LWS PROJECT NUM 15205

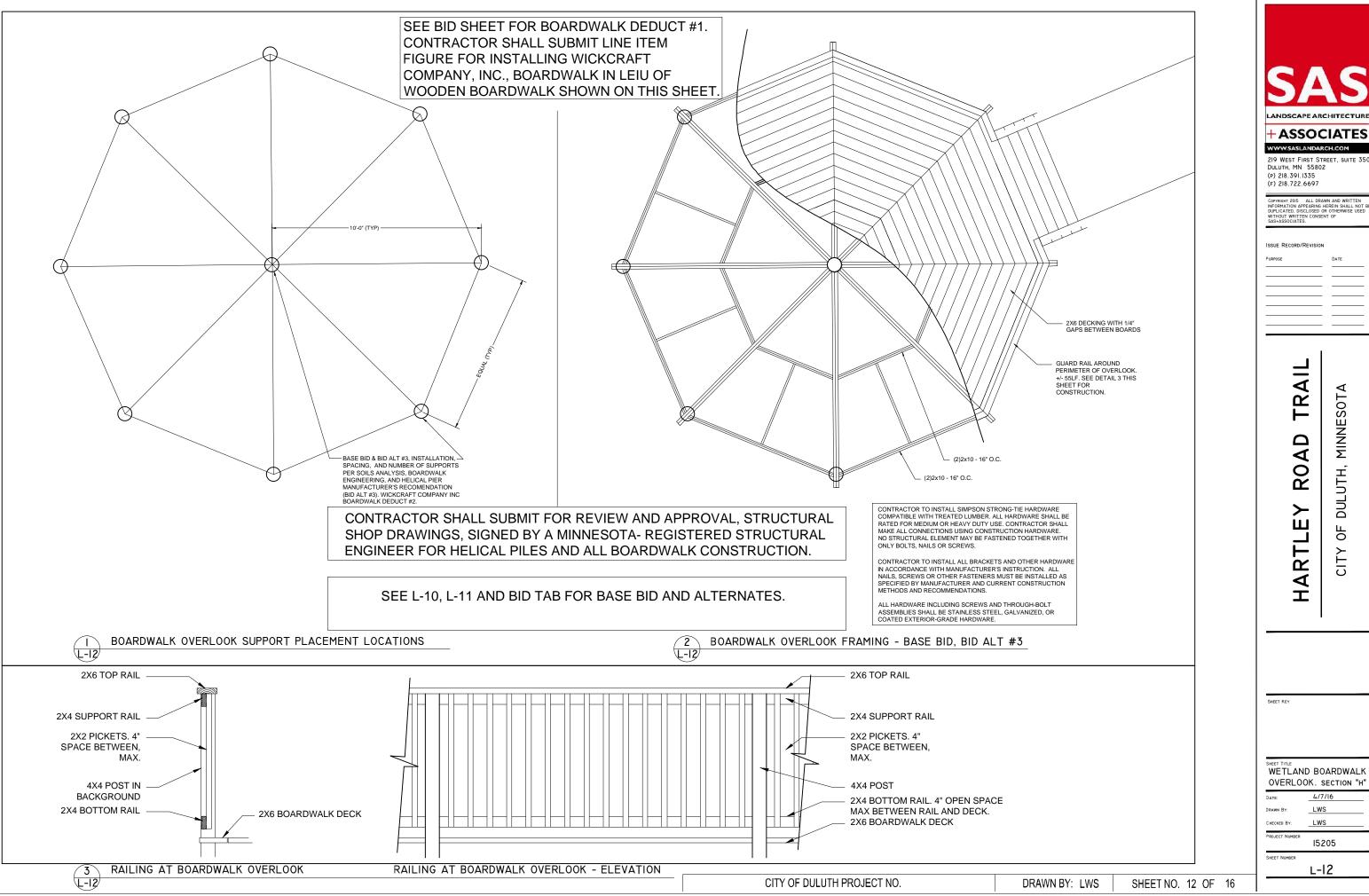
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SHEET NUMBER

CITY OF DULUTH PROJECT NO.

DRAWN BY: LWS

SHEET NO. 11 OF 16



219 WEST FIRST STREET, SUITE 350 DULUTH, MN 55802

OVERLOOK. SECTION "H"



TRAIL TYPE A



TRAIL TYPE B



TRAIL TYPE B



TRAIL TYPE A



TRAIL TYPE B



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PURPOSE	DATE

HARTLEY ROAD TRAIL

DULUTH, MINNESOTA

9F

SHEET KEY

SHEET TITLE
EXISTING CONDITIONS
PHOTOS. TRAIL TYPE A&B

DATE: 4/7/16

DRAWN BY: LWS

CHECKED BY: LWS

SHEET NUMBER L-13

CITY OF DULUTH PROJECT NO. DRAWN BY: LWS SHEET NO. 13 OF 16



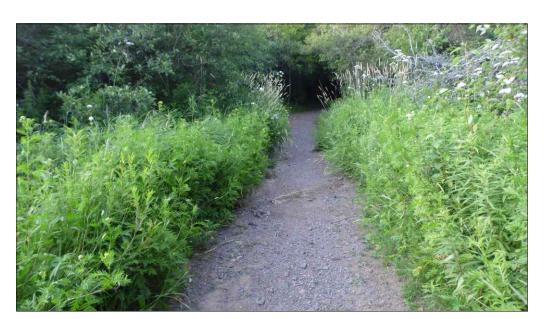
TRAIL TYPE C



TRAIL TYPE C



TRAIL TYPE C



TRAIL TYPE D

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TRAIL ROAD

DULUTH, MINNESOTA HARTLEY CITY OF I

SHEET TITLE

EXISTING CONDITIONS

PHOTOS. TRAIL TYPE C&D

LWS

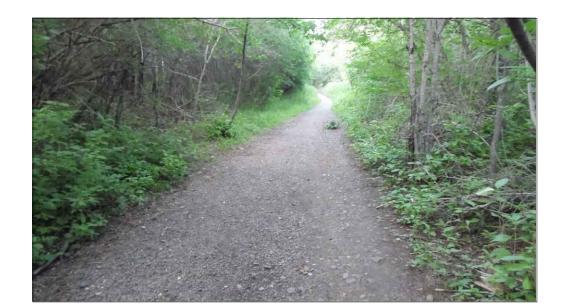
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L-14

CITY OF DULUTH PROJECT NO. DRAWN BY: LWS SHEET NO. 14 OF 16



TRAIL TYPE E



TRAIL TYPE E



TRAIL TYPE E



TRAIL TYPE E

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LANDSCAPE ARCHITECTURE
+ ASSOCIATES

ISSUE RECORD/REVISION	
PURPOSE	DATE

TRAIL DULUTH, MINNESOTA

ROAD HARTLEY

CITY OF

SHEET TITLE

EXISTING CONDITIONS PHOTOS. TRAIL TYPE E

LWS PROJECT NUMBER 15205

SHEET NUMBER L-15

SHEET NO. 15 OF 16

CITY OF DULUTH PROJECT NO.

DRAWN BY: LWS



TRAIL TYPE F



TRAIL TYPE F



TRAIL TYPE E

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ISSUE RECORD/REVISION	
PURPOSE	DATE

TRAIL CITY OF DULUTH, MINNESOTA

ROAD HARTLEY

SHEET TITLE
EXISTING CONDITIONS PHOTOS. TRAIL TYPE F

LWS PROJECT NUMBER

15205 SHEET NUMBER L-16

SHEET NO. 16 OF 16

CITY OF DULUTH PROJECT NO.

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